

Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1. (Currently Amended) A transmitter unit for transmitting data via a data link, said transmitter unit comprising:

a header compression unit adapted for converting a primary header of a data packet into a corresponding secondary header, with said primary header being related to said secondary header in one-to-one correspondence;

wherein said header compression unit comprises at least one header lookup table that includes an entry corresponding to a portion of said primary header, wherein a Payload Type Identifier of said primary header is replaced by zeros within said entry;

wherein said secondary header comprises a single byte that represents a compressed version of the primary header, said ~~and includes~~ a single byte comprising an entry number for ~~[[a]]~~ said header lookup table and an unmodified Payload Type Identifier copied from the primary header;

wherein said entry number corresponds to said entry comprising said primary header;

wherein said transmitter unit is adapted for transmitting a modified data packet via said data link, said modified data packet comprising said corresponding secondary header.

2. (Original) The transmitter unit of claim 1, wherein said data packet is an ATM cell, and wherein said primary header is an ATM header.

3. (Original) The transmitter unit of claim 1, wherein said data link is part of an access network, in particular of an xDSL network.
4. (Canceled)
5. (Original) The transmitter unit of claim 1, wherein the size of said secondary header is substantially smaller than the size of said primary header.
6. (Original) The transmitter unit of claim 1, wherein said header compression unit is adapted for converting said primary header in real-time.
7. (Original) The transmitter unit of claim 1, wherein said header compression unit is adapted for removing redundancy check bits that are part of said primary header.
8. (Original) The transmitter unit of claim 1, wherein said header compression unit is adapted for copying a predefined part of the bit sequence for said primary headers to said corresponding secondary header without any modification.
9. (Original) The transmitter unit of claim 1, wherein said header compression unit is adapted for assigning, whenever a previously unknown primary header is encountered for the first time, a secondary header to said primary header.

10. (Currently Amended) The transmitter unit of claim 1, wherein ~~said header compression unit comprises at least one lookup table, with~~ said lookup table ~~[[being]]~~ is accessed for converting said primary header, or a part thereof, into said corresponding secondary header, or a part thereof.

11. (Original) The transmitter unit of claim 10, wherein said header compression unit is adapted for creating, whenever said secondary header is assigned to a previously unknown primary header, a corresponding entry in said lookup table.

12. (Canceled)

13. (Canceled)

14. (Original) The transmitter unit of claim 10, wherein said header compression unit is adapted for searching said lookup table for an entry that matches with said primary header of said data packet to be transmitted, or with a part thereof, and for fetching, in case of a match, said corresponding secondary header, or a part thereof.

15. (Original) The transmitter unit of claim 1, wherein said transmitter unit is adapted for transmitting update information packets via said data link, with said update information packets comprising update information for updating at least one lookup table on the part of a receiver unit.

16. (Original) The transmitter unit of claim 15, wherein each time a new entry in said at least one lookup table is created, an update information packet comprising header information of said entry is transmitted.

17. (Original) The transmitter unit of claim 15, wherein said update information comprises one or more secondary headers, or parts thereof, and for each of said secondary headers, a corresponding primary header said secondary header has been assigned to, or parts thereof.

18. (Original) The transmitter unit of claim 1, wherein said secondary header comprises extra bits that are used for transmitting control information.

19. (Original) The transmitter unit of claim 1, wherein said secondary header comprises extra bits for accommodating count values required for transmitting said modified data packet in an inverse multiplexing mode.

20. (Currently Amended) A receiver unit for receiving data transmitted via a data link, said receiver unit comprising:

a header decompression unit adapted for converting a secondary header of a modified data packet received via said data link into a corresponding primary header, with said secondary header being related to said primary header in one-to-one correspondence;

wherein said header decompression unit comprises at least one header lookup table that includes an entry corresponding to a portion of said primary header, wherein a Payload Type Identifier of said primary header is replaced by zeros within said entry;

wherein said secondary header comprises a single byte that represents a compressed version of the primary header, said ~~and includes~~ a single byte comprising an entry number for ~~[[a]]~~ said header lookup table and an unmodified Payload Type Identifier;

wherein said entry number corresponds to said entry comprising said primary header.

21. (Canceled)

22. (Previously Presented) The receiver unit of claim 20, wherein said receiver unit is adapted for performing a cell delineation by counting the bytes received by said receiver unit.

23. (Original) The receiver unit of claim 20, wherein said receiver unit is adapted for performing a cell delineation by counting the bytes received by said receiver unit.

24-30. (Canceled)